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NOTICE OF ALLOWANCE AND FEE(S) DUE

21003

7590

05/28/2010

BAKER BOTTS L.L.P. 30 ROCKEFELLER PLAZA 44TH FLOOR NEW YORK, NY 10112-4498 EXAMINER

KAMAL, SHAHID

ART UNIT

PAPER NUMBER

3714 DATE MAILED: 05/28/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,177	01/29/2007	Arthur D. Kranzley	070457.2081	1386

TITLE OF INVENTION: SYSTEMS AND METHODS FOR CONDUCTING SECURE PAYMENT TRANSACTIONS USING A FORMATTED DATA

STRUCTURE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	08/30/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

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III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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NEW YORK, N	IY 10112-4498						(Depositor's name)
							(Signature)
							(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTO	R	ATTC	DRNEY DOCKET NO.	CONFIRMATION NO.
10/560,177	01/29/2007	•	Arthur D. Kranzley		•	070457.2081	1386
TITLE OF INVENTION STRUCTURE	N: SYSTEMS AND ME	THODS FOR CONDUC	TING SECURE PAYMI	ENT TRANSACTI	ONS U	SING A FORMATTE	D DATA
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSU	JE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0		\$1810	08/30/2010
EXAM	IINER	ART UNIT	CLASS-SUBCLASS				
KAMAL,	SHAHID	3714	705-044000				
CFR 1.363). Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON TO PLEASE NOTE: Unless an assignee is identified below, no assignee recordation as set forth in 37 CFR 3.11. Completion of this form is NOTE.			listed, no name will be printed. THE PATENT (print or type) e data will appear on the patent. If an assignee is identified below, the document has been filed for OT a substitute for filing an assignment.				
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21003 75	21003 7590 05/28/2010			EXAMINER		
BAKER BOTTS L.L.P. 30 ROCKEFELLER PLAZA 44TH FLOOR NEW YORK, NY 10112-4498			KAMAL, SHAHID			
			ART UNIT	PAPER NUMBER		
			3714			
NEW TORK, NT	10112-4496		DATE MAILED: 05/28/2010			

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 100 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 100 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)
	10/560,177	KRANZLEY ET AL.
Notice of Allowability	Examiner	Art Unit
	SHAHID KAMAL	3714
The MAILING DATE of this communication appeal all claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R	(OR REMAINS) CLOSED in this a or other appropriate communicati IGHTS. This application is subject	application. If not included on will be mailed in due course. THIS
1. This communication is responsive to 02/18/2010.		
2. 🔀 The allowed claim(s) is/are <u>1-3, 5-12, 14-18 and 20-22</u> .		
3. ☐ Acknowledgment is made of a claim for foreign priority ur a) ☐ All b) ☐ Some* c) ☐ None of the: 1. ☐ Certified copies of the priority documents have		
2. ☐ Certified copies of the priority documents have		
3. ☐ Copies of the certified copies of the priority do	• • •	
International Bureau (PCT Rule 17.2(a)).	cuments have been received in th	is national stage application from the
* Certified copies not received:		
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		ly complying with the requirements
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give		
5. CORRECTED DRAWINGS (as "replacement sheets") mus	st be submitted.	
(a) ☐ including changes required by the Notice of Draftspers	son's Patent Drawing Review (PT	O-948) attached
1) 🔲 hereto or 2) 🔲 to Paper No./Mail Date		
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date	s Amendment / Comment or in the	e Office action of
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t		
6. DEPOSIT OF and/or INFORMATION about the depo attached Examiner's comment regarding REQUIREMENT		
Attachment(s)	5	I Detect Application
1. Notice of References Cited (PTO-892)	5. Notice of Informa	
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)	6.	Date .
 Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 04/22/2010 	7. 🛛 Examiner's Amer	dment/Comment
4. ☐ Examiner's Comment Regarding Requirement for Deposit	8. 🛛 Examiner's State	ment of Reasons for Allowance
of Biological Material	9.	
/Pierre E. Elisca/		
Primary Examiner, Art Unit 3714		

Art Unit: 3714

DETAILED ACTION

Acknowledgements

1. Applicant's amendment filed on February 18, 2010 is acknowledged. Accordingly, claims 1-3, 5-12, 14-18 and 20-22 remain pending and have been allowed.

Examiner's Amendment

- 2. An Examiner's amendment to the record appears below. Should the changes and/or additions by unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. §1.312. To ensure consideration of such amendment, it must be submitted no later than the payment of the issue fee.
- 3. Authorization for this Examiner's amendment was given in a telephonic communication with Robert Maier (Registration No. 54,291) on or about May 21, 2010.
- 4. The application has been amended as follows:

Listing of Claims

1. (Currently Amended) A system for authenticating a cardholder transaction with a merchant on an electronic network, the system comprising:

an issuer platform layer including at least one 3-D Secure authentication program;

a merchant plug-in (MPI);

an secure payment algorithm (SPA); and

Art Unit: 3714

and a data transport layer, wherein the issuer platform comprises an access control server (ACS) that uses the SPA to process transaction and cardholder information for authentication by an authentication method and to generate an Accountholder Authentication Value (AAV) and conveys the AAV through the data transport layer to the MPI, wherein the AAV is a formatted data structure compatible with 3-D Secure message protocols, wherein the formatted data structure has a length of at most 20-bytes including bytes that identify a hash of the merchant's name, bytes that identify the ACS, bytes that identify the authentication method, bytes that identify secret cryptographic keys and bytes that include a merchant authentication code (MAC).

wherein the SPA comprises an encryption algorithm for generating the MAC, wherein the encryption algorithm uses a pair of secret keys A and B that are identified in the AAV to encrypt a concatenation of the card holder's account number, card expiration date and service code to generate a three-digit CVC2 field, and uses the result to populate two bytes of the MAC.

- 2. (Previously Presented) The system of claim 1 wherein the AAV is a formatted data structure that is Base 64 encoded.
- 3. (Previously Presented) The system of claim 1, wherein the SPA comprises an encryption algorithm for generating the MAC, wherein the encryption algorithm uses a secret key identified in the AAV to encrypt a concatenation of the card holder's account number and a plurality of the fields of the bytes of the AAV excluding bytes that represent the MAC, and wherein a portion of the encryption result forms the MAC bytes in the AAV.
- 4. (Canceled)

- 5. (Previously Presented) The system of claim 4 wherein the pair of secret keys A and B are 64-bit Data Encryption Standard (DES) keys.
- 6. (Previously Presented) The system of claim 1 wherein the ACS is configured to generate an AAV in response to a payment authentication request message from the MPI to the ACS.
- 7. (Previously Presented) The system of claim 1, which is configured to transport the AAV in a payment authentication response message from the ACS.
- 8. (Previously Presented) The system of claim 7 wherein the ACS is further configured to place a digital signature on the payment authentication response message.
- 9. (Previously Presented) The system of claim 1 wherein the MPI is configured to verify the digital signature on a received payment authentication response message.
- 10. (Previously Presented) The system of claim 1 wherein the MPI is configured to extract the MAC fields included in a payment authentication response message from the ACS and to place the extracted MAC in a payment authorization request message to a third party.
- 11. (Currently Amended) A data structure for conveying cardholder transaction authentication information amongst stakeholders in a 3-D Secure environment, the data structure comprising 20 bytes of Base 64 encoded characters, wherein the first byte is a control byte, bytes 2-9 represent a hash of a merchant name, byte 10 identifies an Access control server (ACS) that authenticates the cardholder transaction by an authentication method, byte 11 identifies the authentication method and the secret encryption keys that are used by the ACS to generate a

Merchant Authentication Code (MAC), bytes 12-15 represent a transaction sequence number identifying a transaction number processed by the ACS, and bytes 16-20 represent the MAC,

wherein the MAC comprises portions of an encryption of a concatenation of the card holder's account number, card expiration date and service code, and wherein a pair of keys A and B that are identified in byte 11 is used for encryption..

- 12. (Previously Presented) The data structure of claim 11 wherein the MAC comprises portions of an encryption of a concatenation of the card holder's account number and a plurality of the fields of bytes 1-15 of the data structure, and wherein a single key identified in byte 11 is used for encryption.
- 13. (Canceled)
- 14. (Previously Presented) The data structure of claim 13 wherein a three-digit encryption result is used to populate two bytes of the MAC bytes 16-20.
- 15. (Previously Presented) The data structure of claim 13 wherein the pair of secret keys A and B are 64 bit Data Encryption Standard (DES) keys.
- 16. (Currently Amended) A method for authenticating a cardholder transaction with a merchant on an electronic network in an 3-D Secure environment, the method comprising:

using an Access control server (ACS) to process cardholder and transaction information to authenticate the cardholder by an authentication method;

Art Unit: 3714

deploying a secure payment algorithm (SPA) to generate an Accountholder Authentication Value (AAV) to represent the authentication results, and transporting the AAV in 3-D Secure messages to the merchant, wherein the AAV is a formatted data structure that has a length of at most 20 bytes, including bytes that identify a hash of the merchant's name, bytes that identify the ACS, bytes that identify the authentication method, bytes that include a merchant authentication code (MAC), and bytes that identify secret cryptographic keys that are used by the SPA to generate MAC,

wherein deploying a SPA comprises:

using a pair of pair secret keys A and B that are identified in the AAV to encrypt a concatenation of the card holder's account number, card expiration date and service code to generate a three-digit CVC2 field; and

assigning the result to populate two bytes of the MAC.

- 17. (Previously Presented) The method of claim 16 wherein the AAV is a formatted data structure that is Base 64 encoded.
- 18. (Previously Presented) The method of claim 16 wherein deploying a SPA comprises: using a secret key identified in the AAV to encrypt a concatenation of the card holder's account number and at least portions of the bytes of the AAV excluding bytes that represent the

MAC; and

assigning a portion of the encryption result to the MAC bytes in the AAV.

Art Unit: 3714

19. (Canceled)

20. (Previously Presented) The method of claim 17 wherein the pair of secret keys A and B

are 64 bit Data Encryption Standard (DES) keys.

21. (Previously Presented) The method of claim 16 wherein transporting the AAV in 3-D

Secure messages to the merchant comprises transporting the AAV in a payment authentication

response message that is digitally signed by the ACS.

22. (Previously Presented) The method of claim 21, further comprising:

first, verification by the merchant of the digital signature on a received payment

authentication response message; and

next, extraction of the MAC fields from the received payment authentication response

message by the merchant.

Reasons for Allowance

5. The following is an examiner's statement of reasons for allowance:

6. Regarding the claimed terms, the Examiner notes that a "general term must be understood

in the context in which the inventor presents it." In re Glaug 283 F.3d 1335, 1340, 62 USPQ2d

1151, 1154 (Fed. Cir. 2002). Therefore the Examiner must interpret the claimed terms as found

on pages 1-23 of the specification. Clearly almost all the general terms in the claims may have

multiple meanings. So where a claim term "is susceptible to various meanings, . . . the

Art Unit: 3714

inventor's lexicography must prevail" *Id*. Using these definitions for the claims, the claimed invention was not reasonably found in the prior art.

- 7. This application is regarding A formatted data structure is provided for conveying the results of ecommerce authentication programs that are used to authenticate a cardholder's on-line transactions. The data structure, which has at most a 20-byte length, is designed to be compatible with 3-D Secure message protocols used in e-commerce. The data structure includes designated fields that include a hash of the merchant's name, identify an authentication service provider, identify the authentication method used, and include a merchant authentication code which ties cardholder information to the transaction. Secure payment algorithms are provided for use by the e-commerce authentication programs to generate authentication results in the desired format. In one secure payment algorithm, a secret key is used to encrypt a concatenation of a cardholder account number with information from designated fields of the data structure. In another secure payment algorithm, a pair of secret keys is used to encrypt a concatenation of the cardholder's account number, card expiration date and service code. In both cases, portions of the encryption results are used to define the merchant authentication code.
- 8. The closest prior art is by Hogan et al. (US Patent No. 6,915,279 B2). Hogan teaches that an issuer platform layer including at least one 3-D Secure authentication program; a secure payment algorithm (SPA).

- 9. The second closest prior art is by Dominguez et al. (US Pub. No.: 2003/0200184 A1). Dominguez teaches that a merchant plug-in (MPI; a data transport layer, wherein the issuer platform comprises an access control server (ACS) that uses the SPA to process transaction and cardholder information for authentication by an authentication method and to generate an Accountholder Authentication Value (AAV) and conveys the AAV through the data transport layer to the MPI, wherein the AAV is a formatted data structure compatible with 3-D Secure message protocols, wherein the formatted data structure has a length of at most 20-bytes including bytes that identify a hash of the merchant's name, bytes that identify the ACS, bytes that identify the authentication method, bytes that identify secret cryptographic keys and bytes that include a merchant authentication code (MAC).
- 10. However, the Hogan/ Dominguez combination fails to teach the aspect of "wherein the SPA comprises an encryption algorithm for generating the MAC, wherein the encryption algorithm uses a pair of secret keys A and B that are identified in the AAV to encrypt a concatenation of the card holder's account number, card expiration date and service code to generate a three-digit CVC2 field, and uses the result to populate two bytes of the MAC".
- 11. Yet even if the missing claimed elements were found in a reasonable number of references, a person of ordinary skill in the art at the time the invention was made would not have been motivated to include these missing elements in an embodiment in Walker disclosure because: all of the above mention reference is directed toward for a cryptographically assisted commercial network system designed to facilitate buyer-driven conditional purchase offers.

Art Unit: 3714

12. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Kamal whose telephone number is (571) 270-3272. The Examiner can normally be reached on Mon-Thursday 8:30 AM- 7:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/560,177

Art Unit: 3714

Page 11

/Shahid Kamal/ Examiner, Art Unit 3714

/Pierre E. Elisca/ Primary Examiner, Art Unit 3714